

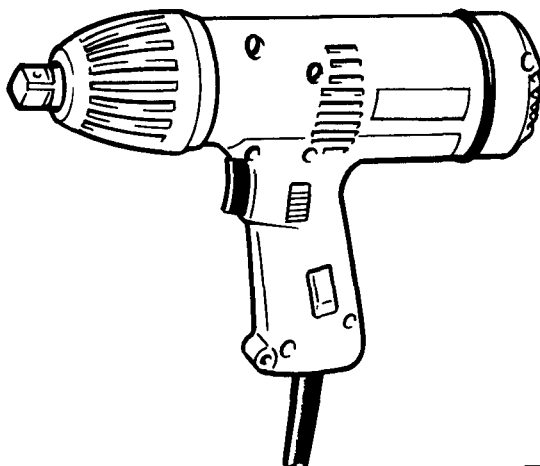
Makita

アメリカ

Impact Wrench

12.7 mm (1/2") MODEL 6904VH

INSTRUCTION MANUAL



**DOUBLE
INSULATION**

SPECIFICATIONS

Capacities					Impacts per minute	
Bolt size		Screw size		Square drive		
Standard bolt	High tensile bolt	Wood screw	Self-drilling screw			High
M10 - M16 (3/8'' - 5/8'')	M10 - M12 (3/8'' - 7/16'')	6.0 mm x 100 mm (1/4'' x 3-15/16'')	6 mm (1/4'')	12.7 mm (1/2'')	0 - 3,000	0 - 2,500

No load speed (RPM)		Fastening torque		Overall length	Net weight
High	Low	High	Low		
0 - 2,400	0 - 2,100	2,000 kg.cm (145 ft.lbs)	1,500 kg.cm (109 ft.lbs)	265 mm (10-3/8'')	1.8 kg (4.0 lbs)

* Manufacturer reserves the right to change specifications without notice.

* Note: Specifications may differ from country to country.

IMPORTANT SAFETY INSTRUCTIONS

(For All Tools)

WARNING: WHEN USING ELECTRIC TOOLS, BASIC SAFETY PRECAUTIONS SHOULD ALWAYS BE FOLLOWED TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, AND PERSONAL INJURY, INCLUDING THE FOLLOWING:

READ ALL INSTRUCTIONS.

1. **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite injuries.
2. **CONSIDER WORK AREA ENVIRONMENT.** Don't use power tools in damp or wet locations. Keep work area well lit. Don't expose power tools to rain. Don't use tool in presence of flammable liquids or gases.
3. **KEEP CHILDREN AWAY.** All visitors should be kept away from work area. Don't let visitors contact tool or extension cord.
4. **STORE IDLE TOOLS.** When not in use, tools should be stored in dry, and high or locked-up place — out of reach of children.
5. **DON'T FORCE TOOL.** It will do the job better and safer at the rate for which it was intended.
6. **USE RIGHT TOOL.** Don't force small tool or attachment to do the job of a heavy-duty tool. Don't use tool for purpose not intended; for example, don't use circular saw for cutting tree limbs or logs.
7. **DRESS PROPERLY.** Don't wear loose clothing or jewelry. They can be caught in moving parts. Rubber gloves and non-skid footwear are recommended when working outdoors. Wear protective hair covering to contain long hair.
8. **USE SAFETY GLASSES.** Also use face or dust mask if cutting operation is dusty.
9. **DON'T ABUSE CORD.** Never carry tool by cord or yank it to disconnect from receptacle. Keep cord from heat, oil, and sharp edges.
10. **SECURE WORK.** Use clamps or a vise to hold work. It's safer than using your hand and it frees both hands to operate tool.
11. **DON'T OVERREACH.** Keep proper footing and balance at all times.
12. **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories. Inspect tool cords periodically and if damaged, have repaired by authorized service facility. Inspect extension cords periodically and replace if damaged. Keep handles dry, clean, and free from oil and grease.
13. **DISCONNECT TOOLS.** When not in use, before servicing, and when changing accessories, such as blades, bits, cutters.

14. **REMOVE ADJUSTING KEYS AND WRENCHES.** Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
15. **AVOID UNINTENTIONAL STARTING.** Don't carry tool with finger on switch. Be sure switch is OFF when plugging in.
16. **EXTENSION CORDS.** Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. Table 1 shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gage. The smaller the gage number, the heavier the cord.

TABLE 1 MINIMUM GAGE FOR CORD SETS

			Total Length of Cord in Feet			
			0 — 25	26 — 50	51 — 100	101 — 150
Ampere Rating More Than	—	Not More Than	A W G			
0	—	6	18	16	16	14
6	—	10	18	16	14	12
10	—	12	16	16	14	12
12	—	16	14	12	Not Recommended	

17. **OUTDOOR USE EXTENSION CORDS.** When tool is used outdoors, use only extension cords intended for use outdoors and so marked.
18. **STAY ALERT.** Watch what you are doing, use common sense. Don't operate tool when you are tired.
19. **CHECK DAMAGED PARTS.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced by an authorized service center unless otherwise indicated elsewhere in this instruction manual. Have defective switches replaced by authorized service center. Don't use tool if switch does not turn it on and off.
20. **GUARD AGAINST ELECTRIC SHOCK.** Prevent body contact with grounded surfaces. For example; pipes, radiators, ranges, refrigerator enclosures.
21. **REPLACEMENT PARTS.** When servicing, use only identical replacement parts.
22. **POLARIZED PLUGS.** To reduce the risk of electric shock, this equipment has a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install the proper outlet. Do not change the plug in any way.

VOLTAGE WARNING: Before connecting the tool to a power source (receptacle, outlet, etc.) be sure the voltage supplied is the same as that specified on the nameplate of the tool. A power source with voltage greater than that specified for the tool can result in **SERIOUS INJURY** to the user — as well as damage to the tool. If in doubt, **DO NOT PLUG IN THE TOOL**. Using a power source with voltage less than the nameplate rating is harmful to the motor.

ADDITIONAL SAFETY RULES

1. Wear ear protectors.
2. Check the socket carefully for wear, cracks or damage before installation.
3. Hold the tool firmly.
4. Always be sure you have a firm footing.
Be sure no one is below when using the tool in high locations.
5. The proper fastening torque may differ depending upon the kind or size of the bolt. Check the torque with a torque wrench.
6. When driving into walls, floors or wherever "live" electrical wires may be encountered, **DO NOT TOUCH ANY METAL PARTS OF THE TOOL!**
Hold the tool only by the insulated grasping surfaces to prevent electric shock if you drive into a "live" wire.

SAVE THESE INSTRUCTIONS.

Selecting correct socket

Always use the correct size socket for bolts and nuts. An incorrect size socket will result in inaccurate and inconsistent fastening torque and/or damage to the bolt or nut. Refer to accessories section for socket size.

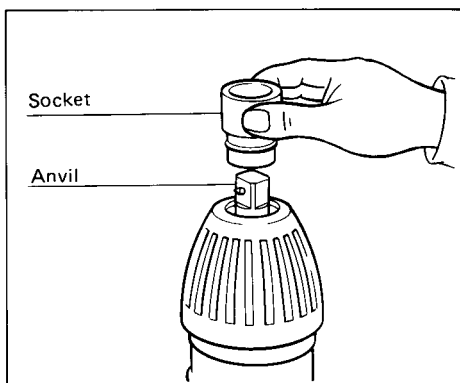
Installing or removing socket

CAUTION:

Always be sure that the tool is switched off and unplugged before installing or removing the socket.

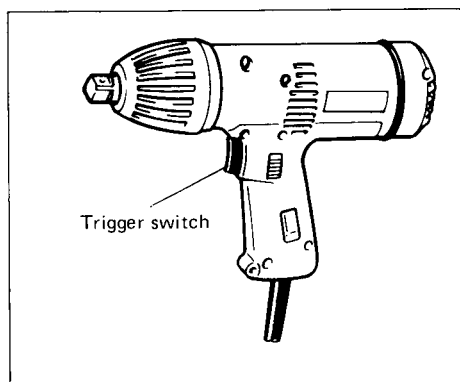
To install the socket, push it onto the anvil of the tool until it locks into place.

To remove the socket, simply pull it off.



Switch action

Tool speed is increased by increasing pressure on the trigger. To start the tool, simply pull the trigger. Release the trigger to stop.

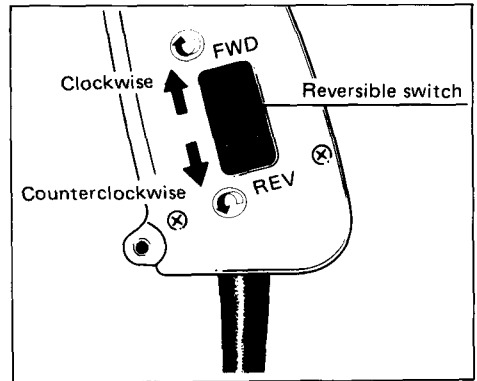


CAUTION:

Before plugging in the tool, always check to see that the trigger switch actuates properly and returns to the "OFF" position when released.

Reversing switch action

This tool has a reversing switch to change the direction of rotation. Press the upper side (FWD side) of the switch for clockwise rotation or the lower side (REV side) of switch for counterclockwise rotation.

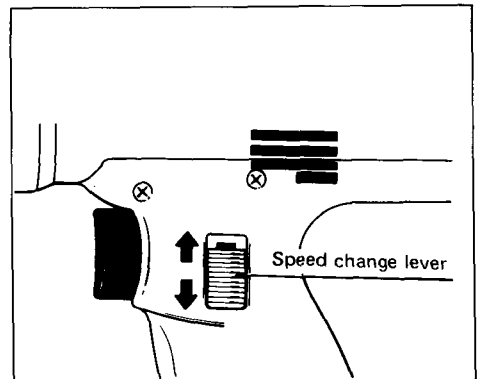


CAUTION:

- Always check the direction of rotation before operation.
- Use the reversing switch only after the tool comes to a complete stop. Changing the direction of rotation before the tool stops may damage the tool.

Speed change

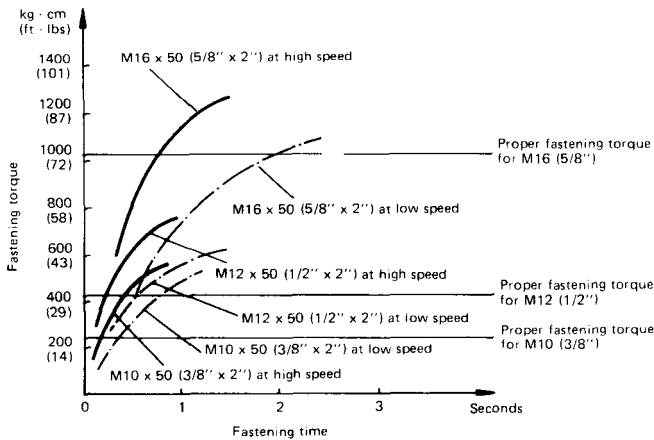
Slide the speed change lever to "H" side (lower side) for higher speed or to "L" side (upper side) for lower speed.



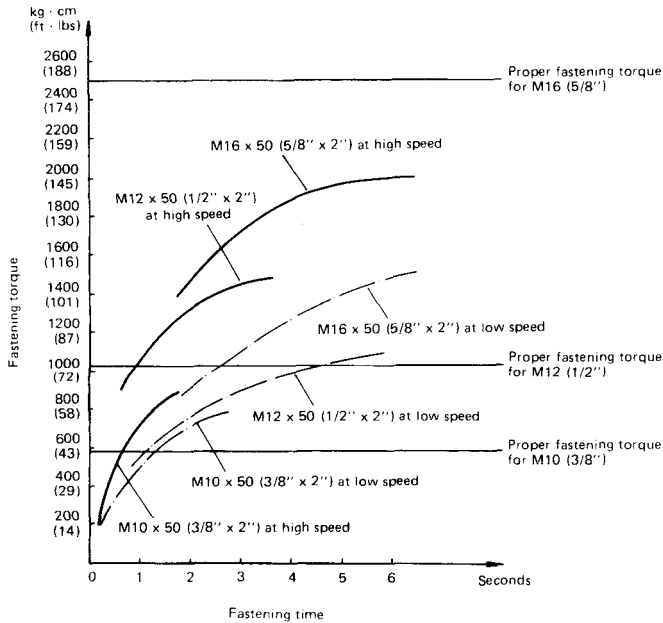
Operation

The proper fastening torque may differ depending upon the kind or size of the bolt. The relation between fastening torque and fastening time is shown in the figures below.

Standard bolt



High tensile bolt



Hold the tool firmly and place the socket over the bolt or nut. Turn the tool on and fasten for the proper fastening time.

NOTE :

- Hold the tool pointed straight at the bolt or nut without applying excessive pressure on the tool.
- Excessive fastening torque may damage the bolt or nut. Before starting your job, always perform a test operation to verify the adequate fastening speed and time for your bolt or nut.

The fastening torque is affected by a wide variety of factors including the following. After fastening, always check the torque with a torque wrench.

1. Voltage

Voltage drop will cause a reduction in the fastening torque.

2. Socket

* Failure to use the correct size socket will cause a reduction in the fastening torque.

* A worn socket (wear on the hex end or square end) will cause a reduction in the fastening torque.

3. Bolt

* Even though the torque coefficient and the class of bolt are the same, the proper fastening torque will differ according to the diameter of the bolt.

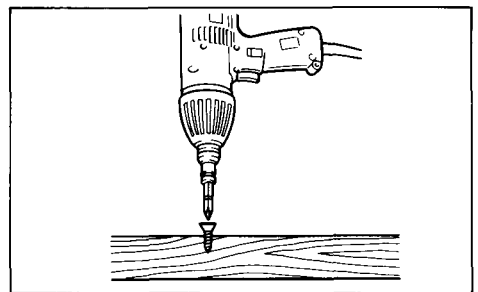
* Even though the diameters of bolts are the same, the proper fastening torque will differ according to the torque coefficient, the class of bolt and the bolt length.

4. The use of the universal joint or the extension bar somewhat reduces the fastening force of the impact wrench. Compensate by fastening for a longer period of time.

5. The type of materials to be fastened and the manner of holding the tool will affect the torque.

Screwdriving

When driving screws, install a bit adapter (optional accessory) on the tool and insert a driver bit (optional accessory) into the bit adapter. Place the point of the driver bit in the screw head and apply pressure to the tool. Start the tool slowly and then increase the speed gradually. Release the trigger just as the screw bottoms out.



NOTE :

- Use the best size driver bit for the size of screw that you wish to use.
- Hold the tool pointed straight at the screw, or the screw and/or bit may be damaged.
- When driving wood screws, predrill pilot holes to make driving easier and to prevent splitting of the workpiece. The pilot holes should be slightly smaller than the wood screws in diameter.

MAINTENANCE

CAUTION:

Always be sure that the tool is switched off and unplugged before attempting to perform inspection or maintenance.

To maintain product **SAFETY** and **RELIABILITY**, repairs, carbon brush inspection and replacement, any other maintenance or adjustment should be performed by Makita Authorized or Factory Service Centers, always using Makita replacement parts.

ACCESSORIES

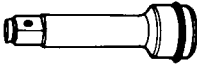
CAUTION:

These accessories or attachments are recommended for use with your Makita tool specified in this manual. The use of any other accessories or attachments might present a risk of injury to persons. The accessories or attachments should be used only in the proper and intended manner.

● Extension bar

Part No. 785201-8

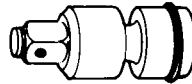
Recommended for work in tight place where the conventional socket will not reach.



● Universal joint

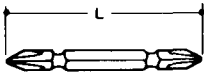
Part No. 785205-0

This accessory is useful in tight spaces where the tool cannot be held in line with the axis of the bolt or nut.



● Phillips bit

(Use with bit adapter)

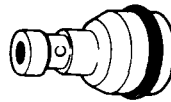


Part No.	Size	L (mm)
784202-3	No. 2	45 (1-3/4")
784203-1		65 (2-5/8")
784206-5		110 (4-3/8")

● Bit adapter

Part No. 134530-0

For driving machine screws.



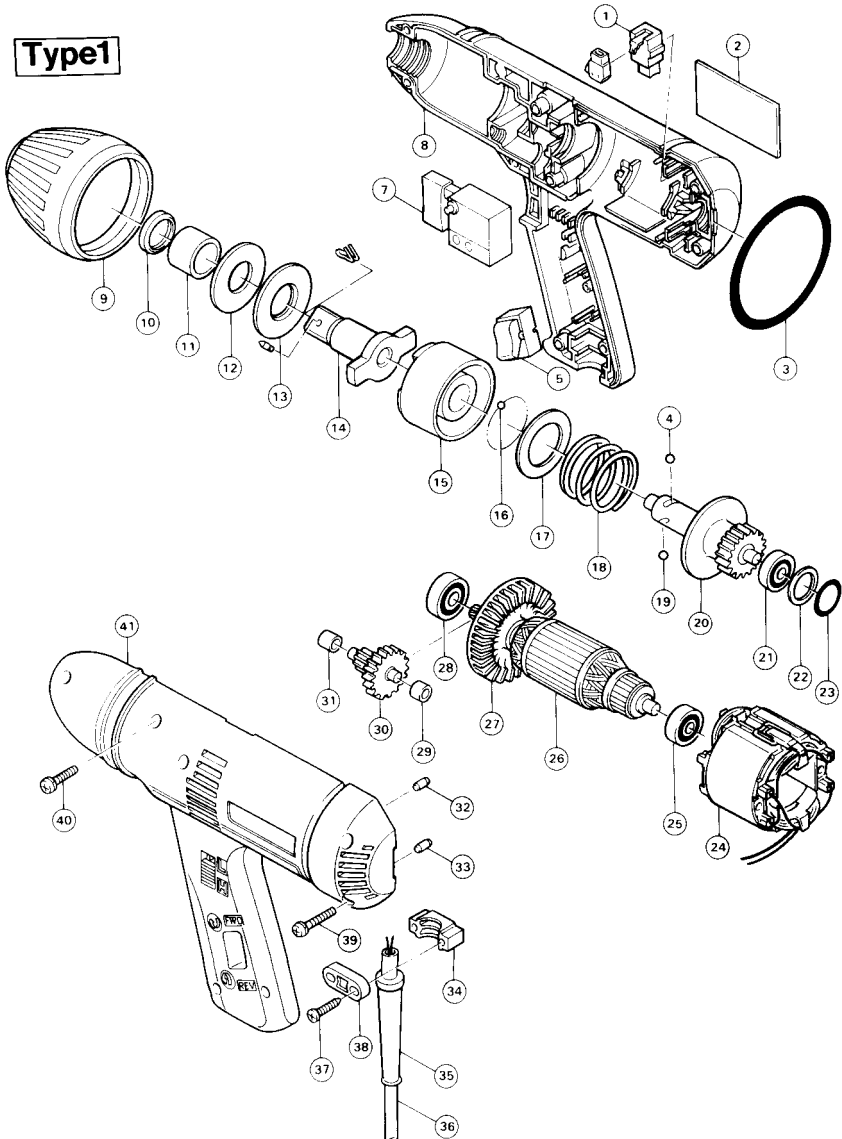
● Plastic carrying case

Part No. 824439-1



12.7 mm (1/2") IMPACT WRENCH Model 6904VH

Type1



Note: The switch and other part configurations may differ from country to country.

ITEM NO.	NO. USED	DESCRIPTION	ITEM NO.	NO. USED	DESCRIPTION
MACHINE			MACHINE		
1	2	Carbon Brush	23	1	O Ring 17
2	1	Name Plate	24	1	Field
3	1	O Ring 62	25	1	Ball Bearing 627LLB
4	1	Steel Ball 5.6	26	1	ARMATURE ASSEMBLY (With Item 25 - 28)
5	1	Switch	27	1	Fan 52
7	1	Switch	28	1	Ball Bearing 609LLB
8	1	Housing Set (With Item 41)	29	1	Plane Bearing 5
9	1	Bumper	30	1	Gear Complete 16-38
10	1	Oil Seal 18	31	1	Plane Bearing 6
11	1	Sleeve 18	32	1	Rubber Pin 4
12	1	Rubber Washer 18	33	1	Rubber Pin 4
13	1	Flat Washer 18	34	1	Strain Relief
14	1	Anvil	35	1	Cord Guard
15	1	Hammer	36	1	Cord
16	25	Steel Ball 4	37	2	Tapping Screw 4x18
17	1	Flat Washer 28	38	1	Strain Relief
18	1	Compression Spring 29	39	3	Pan Head Screw M4x25 (With Washer)
19	1	Steel Ball 5.6	40	7	Pan Head Screw M4x20 (With Washer)
20	1	Spindle	41	1	Housing Set (With Item 8)
21	1	Ball Bearing 608VV			
22	1	Flat Washer 16			

Note: The switch and other part specifications may differ from country to country.

MAKITA LIMITED ONE YEAR WARRANTY

Warranty Policy

Every Makita tool is thoroughly inspected and tested before leaving the factory. It is warranted to be free of defects from workmanship and materials for the period of ONE YEAR from the date of original purchase. Should any trouble develop during this one-year period, return the COMPLETE tool, freight prepaid, to one of Makita's Factory or Authorized Service Centers. If inspection shows the trouble is caused by defective workmanship or material, Makita will repair (or at our option, replace) without charge.

This Warranty does not apply where:

- repairs have been made or attempted by others;
- repairs are required because of normal wear and tear;
- The tool has been abused, misused or improperly maintained;
- alterations have been made to the tool.

IN NO EVENT SHALL MAKITA BE LIABLE FOR ANY INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES FROM THE SALE OR USE OF THE PRODUCT. THIS DISCLAIMER APPLIES BOTH DURING AND AFTER THE TERM OF THIS WARRANTY.

MAKITA DISCLAIMS LIABILITY FOR ANY IMPLIED WARRANTIES, INCLUDING IMPLIED WARRANTIES OF "MERCHANTABILITY" AND "FITNESS FOR A SPECIFIC PURPOSE," AFTER THE ONE-YEAR TERM OF THIS WARRANTY.

This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you.

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